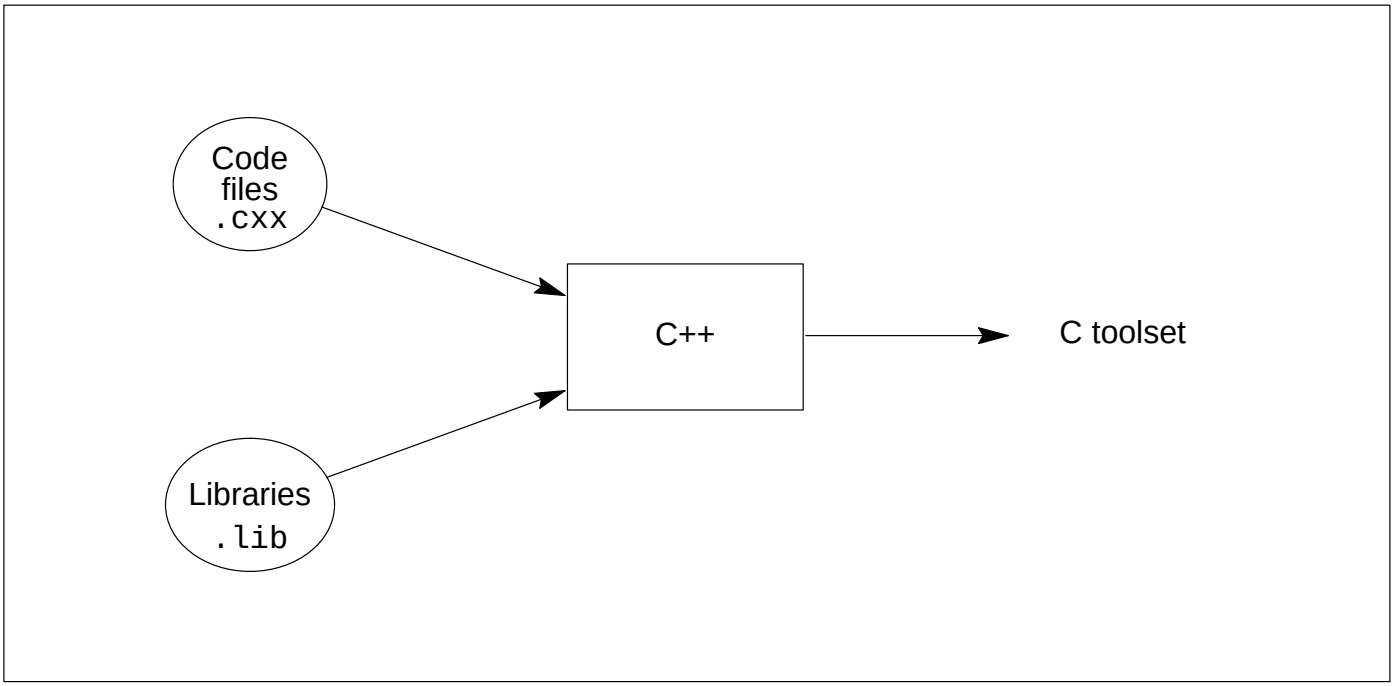
查询ST20-SWC++/PC供应商

C++ preprocessor for ST20 and T4/T8 transputers

PRODUCT INFORMATION



FEATURES

- C++ cross-development for IBM PC and Sun 4 hosts.
- Conformance with the C++ 3.0 specification.
- Support for hardware run-time kernel via ANSI C libraries.
- Support for ST20 processors and T4/T8 transputers.
- Interactive symbolic debugging.
- Post-mortem symbolic debugging.
- Support for EPROM programming.
- Consistent tools across PC and Sun 4 hosts.

APPLICATIONS

- Embedded systems (both single and multiple processors).
- Porting of existing software and packages.
- Evaluation of ST20 and transputer processors.
- Scientific programming.

1 Product Overview

The C++ Preprocessor is derived from *C++ Language System* version 3.0.3 of UNIX System Laboratories Inc.

SGS-THOMSON Microelectronics has developed its own tools and libraries so that the C++ compiler, used in conjunction with the ANSI C Toolset, can be used to programme ST20 and transputer targets.

The C++ Preprocessor is available for two development platforms:

ST20-SWC++/PC C++ Preprocessor for IBM PC under MSDOS 5.0

ST20-SWC++/SUN C++ Preprocessor for Sun 4 under SunOS 4.1.3 or Solaris 2.4

1.1 C++

C++ is a general purpose programming language which has evolved from C. It combines the benefits of object orientated programming with the efficiency of C.

Its benefits include:

- Strong Type Checking

  Helps reduce coding problems.

- Encapsulation

  Constructing large applications is easier by using C++ classes. A C++ class is a user defined type which may contain data to represent the type, and member functions to implement operations on the type.

- Data Abstraction

  Ease maintenance and product evolution by restricting access to a class's implementation details.

- Multiple Inheritance

  Classes may inherit properties from other classes. This enables classes (and hence effort) to be reused.

- Dynamic Binding

  Use function names consistently, independent of object type, as class members may be bound dynamically at run-time (virtual functions).

- Type-Safe Linkage

  Provides function argument checking across different compilation modules. This enables the correct function to be acquired by a linker when several alternatives are available in the presence of function overloading.

- Parameterized Types (Template)

  Allows users to define a type in terms of another, unspecified type, providing a facility for defining extensive standard libraries.

1.2 Use with the ANSI C toolset

The following capabilities of the ANSI C toolset can be used from C++:

- Target processor support library, including functions for using the hardware micro-kernel.
- Multiprocessor configuration tools, for building programs to run on networks of IMS T4xx/T8xx transputers.

2 C++ Product Components

2.1 Documentation

- User guide, describing how to use the Preprocessor;
- Product reference manual, describing this implementation of the C++ language;
- Library manual, describing the C++ class libraries supplied;
- Selected readings, consisting of technical memoranda on the C++ language;
- Handbook, which is a quick reference guide;
- Master index;
- Delivery manual, which includes an installation guide and host-specific information;
- Release notes, which give details of this release.

2.2 Software tools

In normal usage only the C++ driver will be called directly by a user, which calls the other tools as required.

- **iccxx** C++ compilation driver
- **igcpp** C++ preprocessor
- **icfxx** C++ compiler
- **imxx** C++ constructor linker
- **ifxx** C++ debug information filter
- Template instantiation set:
  - * **ptcomp** Instantiation compile-time action
  - * **ptlink** Instantiation link-time action
  - * **tool1, tool2** Template repository tools

2.3 Software Libraries

libcxx.lib C++ iostream and C++ run-time support library

libcplx.lib C++ complex mathematics class library

2.4 Licensing

The ST20-SWC++ C++ Preprocessor is a single-user product.

No licence fee is charged for including C++ or ANSI C libraries in customer products when linked with customer applications using the SGS-THOMSON Microelectronics Limited linker, `ilink`. Example programs and other sources provided may be included in software products, but SGS-THOMSON Microelectronics Limited retain original copyright. Full licensing details are available from SGS-THOMSON Sales Offices, Regional Technology Centers and authorized distributors.

3 Product variants

3.1 IBM PC product

Product

- ST20-SWC++/PC C++ Preprocessor

Operating requirements

For PC-hosted cross-development, the following will be required:

- IBM PC with a 386 or higher processor or equivalent and a minimum of 8Mbytes of memory
- DOS 5.0 or later
- ST20-SWC/PC ST20 ANSI C Toolset version 1.0 or 2.0 or

  IMS D7414 ANSI C Toolset
- 4Mbytes of free disk space

Distribution media

Software is distributed on 1.44 Mbytes 3.5 inch IBM format diskettes.

3.2 Sun 4 product

Product

- ST20-SWC++/SUN C++ Preprocessor

Operating requirements

For Sun-hosted cross-development, the following will be required:

- Sun 4 workstation or server
- SunOS 4.1.3 or Solaris 2.4 or later
- ST20-SWC/SUN ST20 ANSI C Toolset version 1.0 or 2.0 or

  IMS D4414 ANSI C Toolset
- 4 Mbytes of free disk space

Distribution media

Software is distributed on 60 Mbyte QIC-24 $^1/_4$ inch data cartridges, in tar format.

4 Error Reporting And Field Support

ST20 development products are supported worldwide through SGS-THOMSON Sales Offices, Regional Technology Centers, and authorized distributors.

5 Ordering information

Description	Order Number
C++ Preprocessor for IBM PC	ST20-SWC++/PC
C++ Preprocessor for Sun 4	ST20-SWC++/SUN

Table 5.1 Ordering information

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